

whorls are spirally sculptured, neither of which features is mentioned in the diagnosis by Prof. Pilsbry. Probably the type is not mature: all the mature specimens I have seen possess the tubercle; on the other hand, one shell, which appears not quite mature, shows but a slight indication of a swelling. The extreme form mentioned above from Goto measures: diam. 5.75 mm., alt. 5 mm. (figs. 3 *a*–3 *c* magnified, fig. 3 *d* natural size).

*Eulota (Cælorus) cavitectum*, Pils. (Fig. 4 *a* enlarged, fig. 4 *b* natural size.)

*Eulota (Cælorus) cavitectum*, Pilsbry, 'The Nautilus,' xvi. (1903) p. 134.

Kochi, prov. Tosa, Island of Shikoku.

As in the case of *E. caviconus*, Prof. Pilsbry makes no mention of the microscopic spirals. This feature, however, is not easily observed, except where the cuticle is worn off.

LXV.—*Descriptions of some new Sharks in the British Museum Collection.* By C. TATE REGAN, B.A.

*Orectolobus japonicus.*

*Crossorhinus barbatus* (non Gmelin), Müll. & Henle, Plagiost. p. 21, pl. v. (1841); Schleg. Faun. Japon., Poiss. p. 301 (1850).

*Crossorhinus barbatus* (part.), Duméril, Elasmobr. p. 338 (1865); Günth. Cat. Fish. viii. p. 414 (1870).

*Orectolobus barbatus*, Jord. & Fowler, Proc. U.S. Nat. Mus. xxvi. 1903, p. 606.

Closely allied to *O. barbatus*, but differing in the following characters:—No papilliform projections above the eye. Nasal cirrus with a simple branch. On each side 2 or 3 simple dermal lobes above the upper lip, followed by 3 or 4 near the angle of the mouth, the first and last of which are bifid, and by 2, short, broad, and distally notched, at the side of the head. Free edge of dorsal fins straight or slightly concave. Pectoral extending at least  $\frac{2}{3}$  of the distance from its origin to that of the ventral. Yellowish, upper surface with brownish vermiculations or reticulations; back with broad dark brown cross-bars with yellow vermiculations.

*Hab.* Coasts of Japan and China.

Two specimens (♀) of 1000 and 780 mm. from Japan.

The Australian *O. barbatus* has 1 or 2 papilliform projections above the eye, the branch of the nasal cirrus bifid,

3 to 5 dermal lobes above the upper lip and 4 or 5 near the angle of the mouth. The pectoral fin is shorter than in *O. japonicus* and the coloration is different.

*Cestracion amboinensis.*

*Heterodontus zebra* (non Gray), Bleek. Act. Soc. Sc. Neerland. i. 1856, Amboyna, p. 71.

*Cestracion Phillippi* (part.), Günth. Cat. Fish. viii. p. 415 (1870).

Lateral teeth, in the adult, much enlarged, without keels; anterior teeth, in the adult, obtuse, unicuspid; symphysis of the jaws elongate. Supraorbital ridges low, terminating in advance of the first gill-opening, which is about twice as long as the last or as long as its distance from the fourth. Origin of first dorsal above posterior end of base of pectoral; anterior edge of fin rather strongly convex, free edge rather deeply emarginate; length of base  $\frac{1}{2}$  the height of the fin (in the adult); exposed part of spine  $\frac{1}{2}$  its length, which is  $\frac{1}{2}$  the height of the fin. Second dorsal a little nearer to caudal than to first dorsal, its base  $\frac{4}{5}$ , its height  $\frac{2}{3}$  that of the first. Anal, when laid back, not reaching the caudal. Pectoral extending a little beyond the origin of ventral; ventral nearly reaching to below the second dorsal. Yellowish, with alternate paired and unpaired dark brown bars across the back and sides, each of which is more or less completely split into two; the paired bars are interorbital, postorbital, in front of and behind each of the dorsals and in front of the caudal; anterior and posterior edges of eye corresponding to anterior and posterior edges of the pair of interorbital cross-bars.

*Hab.* Ambocyna.

A single specimen of 580 mm. from Dr. Bleeker's collection.

The Chinese *C. zebra* has the dorsal fins less elevated and the dark cross-bars broader and separated by narrower interspaces, and with less tendency of each bar to split into two.

*Centroscymnus macracanthus.*

Dermal denticles each with 3 parallel keels ending in a point posteriorly, the middle the strongest. Distance from mouth to end of snout equal to the distance from eye to first gill-opening; nostrils very oblique; length of anterior labial fold about equal to its distance from the symphysis. Anterior dorsal fin shorter than second, the length of its base (without the spine)  $\frac{2}{3}$  of its height and  $\frac{2}{3}$  of its distance from the second; length of base of second (without the spine)  $\frac{2}{3}$  of its distance from upper caudal lobe; spines well developed and strongly projecting. Pectoral extending to the vertical

from spine of first dorsal, with rounded posterior angle. Ventrals not reaching the vertical from posterior end of second dorsal.

*Hab.* Magellan.

A single specimen (♀) of 640 mm., presented by Capt. Wharton, R.N.

*Centroscymnus cryptacanthus.*

*Centrophorus calolepis* (non Bocage & Capello), Günth. Cat. Fish. viii. p. 423 (1870).

*Centroscymnus calolepis*, Goode & Bean, Oceanic Ichthyol. p. 14, pl. iv. fig. 13 (1896).

Dermal denticles imbricated, those on the head and on the upper and lower parts of the body to the level of the first dorsal fin each with 3 parallel keels ending posteriorly in a point, the others smooth, with rounded free edges and with a rounded depression on the free surface of each. Distance from mouth to end of snout greater than that from eye to first gill-opening; nostrils oblique; length of anterior labial fold about equal to its distance from the symphysis. Anterior dorsal fin shorter than the second, the length of its base (without the spine) about  $\frac{1}{2}$  its height and  $\frac{1}{6}$  of its distance from the second; length of base of second dorsal (without the spine)  $\frac{3}{4}$  its distance from the caudal; spines very short, hidden beneath the skin. Pectoral not extending to the vertical from origin of first dorsal, with rounded posterior angle; ventrals extending to the vertical from the posterior end of second dorsal.

*Hab.* Madeira.

A single specimen (♂) of 700 mm., presented by J. Y. Johnson, Esq.

The relations of the two species of *Centroscymnus* above described are shown in the following synopsis of the species of the genus:—

- |   |                                      |
|---|--------------------------------------|
| I. Anterior labial grooves moderate, each about as long as its distance from the middle of the upper jaw; nostrils oblique.   |                                      |
| Dorsal spines well developed and strongly projecting . . . . .  | 1. <i>macrucanthus</i> , sp. n.      |
| Dorsal spines short, slightly projecting . . . . .  | 2. <i>calolepis</i> , Boc. & Capell. |
| Dorsal spines not projecting, hidden beneath the skin . . . . .   | 3. <i>cryptacanthus</i> , sp. n.     |
| II. Anterior labial grooves long, each about twice as long as its distance from the middle of the upper jaw; nostrils slightly oblique, almost transverse . . . . . | 4. <i>obscurus</i> , Vaill.          |

- III. Anterior labial grooves very long, only separated by a narrow interspace: nostrils transverse ..... 5. *crepidater* \*, Boc. & [Capell.

*Centrophorus Bragancae*.

*Centrophorus granulatus* (part.), Carlos de Braganca, Res. Inv. 'Amelia,' Ichthyol. ii. p. 71 (1904).

Dermal denticles small, those of the anterior part of the body with 2 or 3 keels which converge to a point posteriorly. Length of snout, in front of eye, a little less than the distance from eye to first gill-opening. Interspace between the nostrils equal to their distance from the end of snout, which is  $\frac{2}{3}$  of that from mouth to nostrils. Labial grooves short. Length of base of second dorsal (without the spine)  $\frac{3}{5}$  of its distance from the upper lobe of caudal and  $\frac{3}{4}$  that of the first (without the spine), which is nearly equal to its height and  $\frac{1}{4}$  of the interspace between the two. Dorsal spines well developed and strongly projecting, the second nearly as high as the fin and more than  $\frac{3}{5}$  exposed. Posterior angle of pectoral produced and acutely pointed, extending to below the posterior part of the first dorsal. Ventral extending to below spine of second dorsal. Brownish; fins darker and with light edges.

*Hab.* Deep water off the coast of Portugal.

Two specimens, 440 and 460 mm. in total length, from off Cezimbra, at depths of 276 and 460 fathoms, presented by H.M. the King of Portugal.

The species is especially distinguished from *C. granulatus* by the shorter anterior dorsal fin.

*Squatina australis*.

*Rhina squatina* (non Linn.), McCoy, Prodr. Zool. Vict. iv. pl. xxxiv. (1879); Macleay, Proc. Linn. Soc. N. S. Wales, vi. 1881, p. 368; Johnston, Proc. R. Soc. Tasmania, 1883, p. 139.

Folds at sides of head of nearly equal width throughout, not produced into lobes. Nasal flaps fringed, the inner ramose. Distance between spiracles greater than interocular width, equal to the distance between outer edges of eyes. Outer angle of pectoral scarcely more than a right angle; distance from anterior angle to posterior end of base of pectoral a little more than  $\frac{2}{3}$  of the extreme length of the fin. Ventral not extending to origin of first dorsal. Breadth of tail a little more than  $\frac{1}{4}$  of its length. Base of first dorsal  $\frac{3}{5}$

\* *Centrophorus Rossi*, Alcock, 1898.

its height, which is nearly equal to the distance from the second; second dorsal scarcely smaller than first; interspace between the dorsals  $1\frac{2}{3}$  the distance from second dorsal to caudal,  $\frac{2}{3}$  of the distance from base of tail to origin of first dorsal. Posterior edge of upper caudal lobe convex above, obliquely emarginate below; lower lobe obliquely truncate. Upper surface with small pointed denticles, without keels; median series of enlarged denticles inconspicuous; small imbricated denticles at outer edges of paired fins extending on to their lower surface, covering about the outer half of each fin; denticles on lower surface of tail extending forwards to its base; lower surface of head naked; abdomen naked except for a small median patch. Yellowish, with numerous minute dark spots arranged so as to leave small rounded spots of the lighter ground-colour, the larger of which are each surrounded by a ring of enlarged dark spots.

*Hab.* Southern Australia; Tasmania.

A single specimen of 530 mm. from Port Jackson, presented by the Imperial Institute.

### *Squatina nebulosa.*

*Rhina squatina* (part.), Günth. Cat. Fish. viii. p. 430 (1870).

Folds at sides of head anteriorly forming two lobes with convex edges on each side, the second the larger and opposite the angle of the mouth. Outer nasal flap with entire edges; inner flap with two nearly simple prolongations, the outer of which has a fringed lobe at its base. Distance between the spiracles a little less than the interocular width. Outer angle of pectoral much more than a right angle; distance from anterior angle to posterior end of base of pectoral a little more than  $\frac{1}{2}$  of the extreme length of the fin. Ventral extending beyond the origin of first dorsal. Width of tail a little more than  $\frac{1}{5}$  of its length. Base of first dorsal  $\frac{2}{3}$  its height, which is equal to its distance from the second; second dorsal a little shorter but scarcely lower than first; interspace between the dorsals  $\frac{2}{3}$  of the distance from second dorsal to caudal and  $\frac{4}{5}$  of the distance from base of tail to origin of first dorsal. Posterior edge of upper caudal lobe slightly emarginate; lower lobe nearly vertically truncate. Upper surface with small pointed denticles, each with 3 keels; no median series of enlarged denticles; small imbricated denticles at outer edges of paired fins, extending on to their lower surface and on the pectorals forming a strip about equal in width to the distance between eye and spiracle; denticles on lower surface

of tail not extending forward to its base; lower surface of head and abdomen naked. Brownish, obscurely marbled with blackish, and with a few small round whitish spots.

*Hab.* Japan.

A single specimen of 580 mm.

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LXVI.—*Description of a new Lizard and a new Snake from Australia.* By G. A. BOULENGER, F.R.S.

*Varanus Ingrami.*

Similar to *V. Gouldii*, Gray, but snout shorter, its length less than the distance between the anterior border of the orbit and the anterior border of the ear, scales on upper surface of snout, vertex, and occiput much larger than those on the supraocular and temporal regions, and caudal scales much larger. The latter are almost tubercular, and form very well-marked whorls, 7 whorls, in the middle of the tail, corresponding to the length of the snout; the scales on the upper surface of the tail form a double tubercular crest. Pale greyish buff above, with a few dark dots on the head and neck and six irregular, broad, rather darker bands across the body, these bands finely dotted with blackish; belly whitish, unspotted; tail with very irregular blackish rings.

From snout to vent 460 mm.; tail 540.

This very distinct species is described from a skin forming part of a small collection of reptiles from Alexandria, Northern Territory of the Colony of South Australia, made by Mr. W. Stalker, and presented to the British Museum by Sir W. Ingram and the Hon. John Forrest.

*Denisonia Forresti.*

Eye longer than its distance from the mouth. Rostral broader than deep, just visible from above; internasals half as long as the præfrontals; frontal once and one third as long as broad, twice as broad as the supraocular, as long as its distance from the end of the snout, much shorter than the parietals; nasal entire, separated from the single præocular by the præfrontal, which forms a suture with the second upper labial; two postoculars; temporals 2+2, lower anterior wedged in between the fifth and sixth labials; six upper labials, third and fourth entering the eye; three lower labials